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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,826	06/26/2003	William W. Buchanan JR.	RPS9-2003-0095	8068

45219 7590 09/29/2006

KUNZLER & ASSOCIATES  
8 EAST BROADWAY  
SUITE 600  
SALT LAKE CITY, UT 84111

EXAMINER
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VO, THANH DUC

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	<b>Application No.</b> 10/608,826	<b>Applicant(s)</b> BUCHANAN ET AL.	
	<b>Examiner</b> Thanh D. Vo	<b>Art Unit</b> 2189	

All participants (applicant, applicant's representative, PTO personnel):

(1) Thanh D. Vo. (3) \_\_\_\_\_

(2) Thorpe, Scott (Applicant's Representative). (4) \_\_\_\_\_

Date of Interview: 19 September 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: Copy of proposal claim changes.

Claim(s) discussed: 1 and 25.

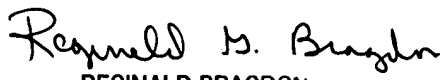
Identification of prior art discussed: Smith (2004/0103337).

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.


Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed with the Applicant's representative regarding the proposed amendment of claim 1. Examiner indicated the limitation "the storage commands do not include commands to initiate predictive failure analysis" was not taught in Specification of the current invention. Applicant agrees with the 35 U.S.C. 101 Rejections and will amend claim 25 and its corresponding dependent claims.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

  
REGINALD BRAGDON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

##### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

**Vo, Thanh Duc**

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**From:** Scott Thorpe [scott\_thorpe@comcast.net]  
**Sent:** Wednesday, September 13, 2006 5:21 PM  
**To:** Vo, Thanh Duc  
**Subject:** Agenda for Sept 19 Telephone Interview for 10/608,826



Telephone  
Interview Agenda 10

Examiner Vo,

Attached is the agenda and proposed amendments for our telephone interview on September 19 at 1:30 EDT. Thank you.

Regards,

Scott Thorpe

Telephone Interview Agenda  
Application 10/608,826  
Tuesday, September 19, 2006  
1:30 EDT

Scott Thorpe  
Kunzler & Associates  
(801) 847-1557

## I. Differences between the present invention and the cited prior art.

Smith (2004/0103337) discloses server-initiated predictive failure analysis (PFA) as opposed to disk drive initiated PFA. Smith teaches monitoring a RAID system for PFA triggering events that are known to the server. Smith, ¶ 15. If there is an event, the server sends a PFA initiation command to the disk drives of the storage array. Smith, Fig. 2, Ref. 66. The drives perform PFA autonomously. Smith ¶ 14. The June 28 rejection relies on Smith teaching a server 12 (host) bypassing the RAID controller 14 to communicate the PFA initiation command directly to the disk drives (storage array). Smith, Page 3 ¶ 28, last sentence; Fig. 1, Refs. 12, 22, 14.

Wang (6,834,326) teaches controlling disks and replacing a faulty controller. However, Wang does not disclose directing storage commands in response to detecting a faulty RAID controller. Wang, Col. 21, Lines 51-52.

The present invention allows a host computer to communicate with a RAID storage array so that if a RAID controller for the storage array fails, the host computer can access the storage array. The invention eliminates the need for a redundant RAID controller.

Thus the present invention controls the storage array with the host when the RAID controller fails, emulating a RAID controller, while Smith may bypass the RAID controller to communicate a PFA initiation command, but otherwise only accesses the storage array through the RAID controller.

## II. Proposed amendments.

1. (Proposed amendment) An apparatus for alternate control of a storage array, the apparatus comprising:

a RAID controller operably connected to a storage array, the RAID controller configured to receive storage commands from a host computer and execute corresponding operations on the storage array;

a storage adapter residing on the host computer, the storage adapter operably connected to the storage array independent of the RAID controller, the storage adapter configured to transmit storage commands to a selected storage device within the storage array; and

a control module residing on the host computer, the control module configured to selectively direct storage commands to the RAID controller and the storage adapter, wherein the control module directs commands to the storage adapter emulating a RAID controller in response to detecting a faulty RAID controller and the storage commands do not include commands to initiate predictive failure analysis.